

Title (en)

System and method for transferring substrates carriers between processing tools

Title (de)

Vorrichtung und Verfahren zum Transfer von Substrat-Behältern zwischen Verarbeitungsgeräten

Title (fr)

Appareillage et procédé de transfer de boîtiers pour substrats entre des outils de traitements

Publication

**EP 1450393 A3 20071212 (EN)**

Application

**EP 04250420 A 20040127**

Priority

US 44300103 P 20030127

Abstract (en)

[origin: EP1450393A2] In a first aspect, a method of managing work in progress within a small lot size semiconductor device manufacturing facility is provided. The first method includes providing a small lot size semiconductor device manufacturing facility having (1) a plurality of processing tools; and (2) a high speed transport system adapted to transport small lot size substrate carriers among the processing tools. The method further includes maintaining a predetermined work in progress level within the small lot size semiconductor device manufacturing facility by (1) increasing an average cycle time of low priority substrates within the small lot size semiconductor device manufacturing facility; and (2) decreasing an average cycle time of high priority substrates within the small lot size semiconductor device manufacturing facility so as to approximately maintain the predetermined work in progress level within the small lot size semiconductor device manufacturing facility. Numerous other aspects are provided.

IPC 8 full level

**G05B 19/418** (2006.01); **H01L 21/00** (2006.01); **H01L 21/02** (2006.01); **H01L 21/677** (2006.01); **H01L 21/68** (2006.01)

CPC (source: EP KR US)

**F24C 7/043** (2013.01 - KR); **F24C 15/22** (2013.01 - KR); **H01L 21/67276** (2013.01 - EP US); **H01L 21/67727** (2013.01 - EP US);  
**H01L 21/67769** (2013.01 - EP US); **H01L 21/67778** (2013.01 - EP US); **Y02P 80/40** (2015.11 - EP US); **Y02P 90/02** (2015.11 - EP US);  
**Y02P 90/80** (2015.11 - EP US)

Citation (search report)

- [X] GB 2056169 A 19810311 - HITACHI LTD
- [X] EP 0359525 A2 19900321 - FUJITSU LTD [JP]
- [X] US 2001001839 A1 20010524 - LIN ZHIHONG J [US], et al
- [X] US 5612886 A 19970318 - WENG YI-CHERNG [TW]
- [X] US 2002198623 A1 20021226 - JEVATIC DUSAN [US], et al
- [X] US 6224638 B1 20010501 - JEVATIC DUSAN [US], et al
- [X] US 6074443 A 20000613 - VENKATESH SRILAKSHMI [US], et al
- [X] EP 0487419 A2 19920527 - SEIKO EPSON CORP [JP]
- [X] US 5751580 A 19980512 - CHI KEH-FEI CHRIS [SG]
- [X] US 2001018623 A1 20010830 - YAMAGISHI MASAYUKI [JP]
- [A] WO 9954921 A1 19991028 - VARIAN SEMICONDUCTOR EQUIPMENT [US]

Cited by

EP1867590A1; US7506749B2; WO2008097588A1

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Designated extension state (EPC)

AL LT LV MK

DOCDB simple family (publication)

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JP 4860907 B2 20120125; KR 101148692 B1 20120521; KR 20040068879 A 20040802; TW 200416190 A 20040901; TW I316279 B 20091021;  
US 2004193300 A1 20040930; US 2007059861 A1 20070315; US 7221993 B2 20070522; US 7711445 B2 20100504

DOCDB simple family (application)

**EP 04250420 A 20040127;** CN 200410033057 A 20040127; JP 2004018815 A 20040127; KR 20040005097 A 20040127;  
TW 93101779 A 20040127; US 55525206 A 20061031; US 76462004 A 20040126